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# *Mount Jefferson State Park*
# *General Management Plan*

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# GENERAL MANAGEMENT PLAN
# FOR
# MOUNT JEFFERSON STATE PARK

Department of Environment, Health, and Natural Resources

Division of Parks and Recreation

Planning and Development Section

January, 1993

NOV 13 1995

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# INTRODUCTION

Planning is an essential element of effective and efficient park administration and management. The North Carolina General Assembly acknowledged its importance by passing state parks system legislation that includes planning requirements.

The 1987 State Parks Act (G.S.114-44.7 through 114-44.14) stipulates that a State Parks System Plan be prepared. The plan was completed in December 1988. It evaluated the statewide significance of each park, identified duplications and deficiencies in the system, described the resources of the system, proposed solutions to problems, described anticipated trends, and recommended means and methods to accommodate trends.

The State Parks Act also requires each park to have an individual general management plan. The general management plans are required to:

> ...include a statement of purpose for the park based upon its relationship to the System Plan and its classification. An analysis of the major resources and facilities on hand to achieve those purposes shall be completed along with a statement of management direction. The general management plan shall be revised as necessary to comply with the System Plan and to achieve the purpose of the [State Parks Act].

The general management plan (GMP) is to be a comprehensive five-year plan of management for a park unit. GMP's function to:

1. describe park resources and facilities;
2. state the purpose and importance of each park unit;
3. outline interpretive themes and propose locations for informational and interpretive facilities;
4. analyze park and recreation demands and trends in the park's service area;
5. summarize the primary laws guiding park operations;
6. identify internal and external threats to park natural and cultural resources, and propose appropriate responses;
7. identify and set priorities for capital improvement needs;
8. analyze visitor services and propose efficient, effective, and appropriate means of responding to visitor needs; and
9. review park operations and identify actions to support efficient and effective park administrative procedures.

The GMP for Mount Jefferson State Park, developed with public involvement, is intended to serve these purposes.

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# I. DESCRIPTION OF PARK RESOURCES AND FACILITIES

## LOCATION

Mount Jefferson State Park is located near the center of Ashe County in the extreme northwest corner of the state. Jefferson, the county seat, is one and a half miles north of the park via U.S. 221. Access to the park is on S.R. 1152 off U.S. 221.

## LAND BASE

Mount Jefferson State Park was established in 1956 when 452 acres of land were purchased and donated to the state to meet the minimum requirements for a state park. Additional acreage was subsequently acquired, bringing the current total to 489 acres.

The park includes the peak and steep slopes of Mount Jefferson. The steep-sided, northwesterly trending mountain rises abruptly more than 1,600 feet above the surrounding area to an elevation of 4,683 feet above sea level. It lies along the drainage divide of the North Fork and South Fork of the New River. The weathering actions of these drainage systems and other erosive forces influenced the size and shape of Mount Jefferson and other mountains in the area, carving them out of what was once a broad plateau covering most of western North Carolina in past geologic eras.

Mount Jefferson State Park is a botanical paradise, with a variety of trees, shrubs, and flowers. The elevations above 4,000 feet are dominated by red oaks and are characteristic of a more northern environment. Below 4,000 feet, a mixed mesophytic forest more characteristic of a southern environment is dominant.

## VISITOR FACILITIES

Visitor activities at Mount Jefferson State Park include picnicking, hiking, interpretive study, and scenic viewing. Hiking trails at the summit of Mount Jefferson total 1.4 miles. The trails provide opportunities for seeing the varied plant life and natural features of the area as well as the spectacular panoramic views of the countryside.

A picnic area with a restroom facility and 32 tables is located at the summit of the mountain near the parking lot. None of the facilities are handicapped accessible except for one parking space.

The park also provides a series of interpretive programs on the natural and cultural history of the park and surrounding area.

There are two overlooks that provide superlative scenic viewing.

## HISTORY OF THE PARK AREA

The first settlers in the area were Virginians. Few North Carolinians ventured beyond the Blue Ridge Mountains except Daniel Boone and his fellow adventurers travelling the Cumberland Trail to Kentucky.

In 1809, William Walter registered a deed for a large tract of land "on the west side of Negro Mountain." The mountain's name was attributed to its visual appearance during the winter season, when the bare trees exposed large outcrops of smooth black rock. Dr. Elisha Mitchel identified the rock as gneissoid granite in 1927. After ascending Mount Jefferson, Mitchel wrote that "nearly the whole county of Ashe lay at our feet. Some of the plantations... presented a noble appearance, but oh, what an ocean of mountains..."

Mount Jefferson was also known as Panther Mountain because of a legend of a panther having attacked and killed a child there. The mountain had other names as well, until the official name of Mount Jefferson was adopted in 1952 in honor of Thomas Jefferson and his father, Peter Jefferson, who surveyed the North Carolina-Virginia state line and owned land in the area.

The federal Works Progress Administration (WPA) constructed a 2.1 mile road to the summit of the mountain during the 1930s. In 1939, a group of Ashe County local officials sought to have improvements made to the existing road. The request for road improvements was rejected by the State Highway Commission because state funds could not be used for roads leading to private property. Therefore, two prominent local citizens, H.C. Tucker and J. B. Hash, donated 26 acres on top of the mountain for a park. The group then obtained the funds for the road improvements.

The effort to have the General Assembly accept the park as a state park failed in 1942. In 1952, however, the park was designated a state forest wayside park. Although the efforts to attain state park status for Mount Jefferson continued, they were unsuccessful due to the adoption in 1955 of new state park standards requiring a minimum size of 400 acres. Once again, local citizens found a way to help the park. The citizens successfully raised money and acquired the additional acreage necessary to make Mount Jefferson a state park. Their efforts resulted in the purchase and donation of over 400 acres of land. On October 8, 1956, the North Carolina Board of Conservation and Development established Mount Jefferson State Park.

# II. PARK PURPOSES

## MISSION STATEMENT FOR THE STATE PARKS SYSTEM

The North Carolina state parks system exists for the enjoyment, education, health, and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features and recreation resources of statewide significance; to provide outdoor recreation opportunities in a safe and healthy environment; and to provide environmental education opportunities that promote stewardship of the state's natural heritage.

## MOUNT JEFFERSON STATE PARK PURPOSE STATEMENT

Mount Jefferson State Park was established in 1956 when the efforts of local citizens led to the acquisition of 400 acres of land. The establishment was the culmination of an extensive local effort to create a public park on the scenic mountain top. The park serves North Carolina's residents and visitors by protecting wildlife and natural communities within the park; providing opportunities and facilities for viewing and enjoying the major scenic values of the area; providing opportunities for appropriate outdoor recreational use; and providing interpretive and environmental programs that educate park visitors on the plant life, geology, and ecology.

Significant biological resources include the high elevation plant communities that occur above the 4,000 foot elevation, as well as diverse forests on the lower slopes. The high elevation plant communities include Red Oak Forest and the exposed Rock Summit community and Heath Bald community. The fragile plant communities associated with the rock outcroppings at higher elevations include a number of rare species. American chestnut once dominated many of the lower slopes, but these now grade from Northern Hardwood Forest and Rich Cove Forest on the northern slopes, to Montane White Oak Forest on other slopes. The mountain was established as a National Natural Landmark in 1974.

Granite outcroppings at the mountain peak are the most significant geological resources. These outcroppings are particularly evident at two locations, the Luther's Rock Overlook and a second area extending from the peak down along the eastern ridge of the mountain.

The panoramic views from Mount Jefferson are the most significant scenic values in the park. The mountain vistas toward the Blue

Ridge Mountains have attracted visitors for decades and generated the local interest in the park's establishment. The best views are from the granite outcroppings on the peak that rise 1,600 feet above the surrounding area. The mountain is an important scenic landmark on the local landscape.

Mount Jefferson was authorized as a state park so that its geological, biological, and scenic values could be protected. The Division of Parks and Recreation is charged with preserving these values and with providing park experiences that promote pride in and understanding of North Carolina's natural heritage.

# III. SUMMARY OF INTERPRETIVE THEMES

The 1987 State Parks Act defines the purposes of the state parks system. It establishes that:

> The State of North Carolina offers unique archaeologic, geologic, biologic, scenic and recreational resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendents.

It further provides that:

> Park lands are to be used by the people of this State and their visitors in order to promote understanding of and pride in the natural heritage of this State.

One of the best methods of meeting these purposes is through environmental education. The Department of Environment, Health, and Natural Resources has adopted the following definition of environmental education:

> Environmental education is a process that increases awareness, knowledge, and understanding of natural systems -- the interdependence of living things, the impact of human activities -- and results in informed decisions, responsible behavior, and constructive action.

Mount Jefferson State Park is well suited to environmental education, with its excellent representation of geology and habitat types found throughout the mountain provinces, as well as disjunct natural communities.

Mount Jefferson has two primary interpretive themes and two secondary themes. The primary themes are the geology of Mount Jefferson and the unique plant communities.

## PRIMARY INTERPRETIVE THEMES

### GEOLOGY

Mount Jefferson appears to be an inselberg, an isolated mountain surrounded by mountain ranges. The outcrops provide an excellent opportunity for interpretive study of the formation and subsequent erosion of the Southern Appalachian Mountains.

## UNIQUE PLANT COMMUNITIES

Mount Jefferson contains a diversified aggregation of unique plant communities, including many disjunct species that usually occur farther north. For example, the Big Toothed Aspen Community on the north-facing slope of the mountain is more commonly seen from West Virginia to Canada. Nothing blocks the Arctic winter winds, since the next mountain range visible to the north is on the distant horizon.

## SECONDARY INTERPRETIVE THEMES

Two secondary interpretive themes have been identified. They are:

1. Rare and Endangered Species
2. Local History (the mountain was used as part of the Underground Railroad)

# IV. DEMAND

## ANNUAL VISITATION TRENDS

Mount Jefferson State Park experienced an increase in visitation after 1980 when the park began year-round operations. Prior to 1980, the park operated on a seasonal basis. In addition, a self-guided nature trail was completed and opened to the public in 1980 to complement the existing picnicking, hiking, and nature study activities provided by the park.

With the aforementioned changes, annual visitation in 1981 doubled from the previous year and continued to increase over the next three years (Figure IV-1).

Other factors may also have contributed to the increase in visitation. According to the superintendent, the majority of visitors to Mount Jefferson State Park come from outside the county. They come from areas such as Charlotte, Winston-Salem, and surrounding areas because of the easy access from Interstate 77 and US 421. In addition, visitors come off the Blue Ridge Parkway, which is only 10 miles from the park. The Parkway has an overlook with an eight-car parking area that provides interpretation of Mount Jefferson.

Following the increase in visitation from 1980 to 1984, fluctuations in visitation continued. Visitation dropped 19 percent in 1985, only to increase an average of 30 percent over the next two years. After that, visitation began falling once again, with significant declines in 1989 and 1990. In 1990, the number of visits dipped back down to a low of 62,900, the same figure recorded for 1982. This low visitation can be attributed to Mount Jefferson's lack of a water system in 1989 and 1990. The water system has since been repaired, but statistics show that visitation dropped to under 60,000 in 1991. Visitors from outside the county area may not be aware that the water system is now operational.

## MONTHLY VISITATION TRENDS

Although Mount Jefferson State Park is open year round, the water system is not operable during the winter months because of the extreme temperatures. Therefore, visitation during the winter is limited to short-term vista visits and cross-country skiing, which do not require the provision of water or restroom facilities.

## VISITATION TRENDS
## 1980 - 1990

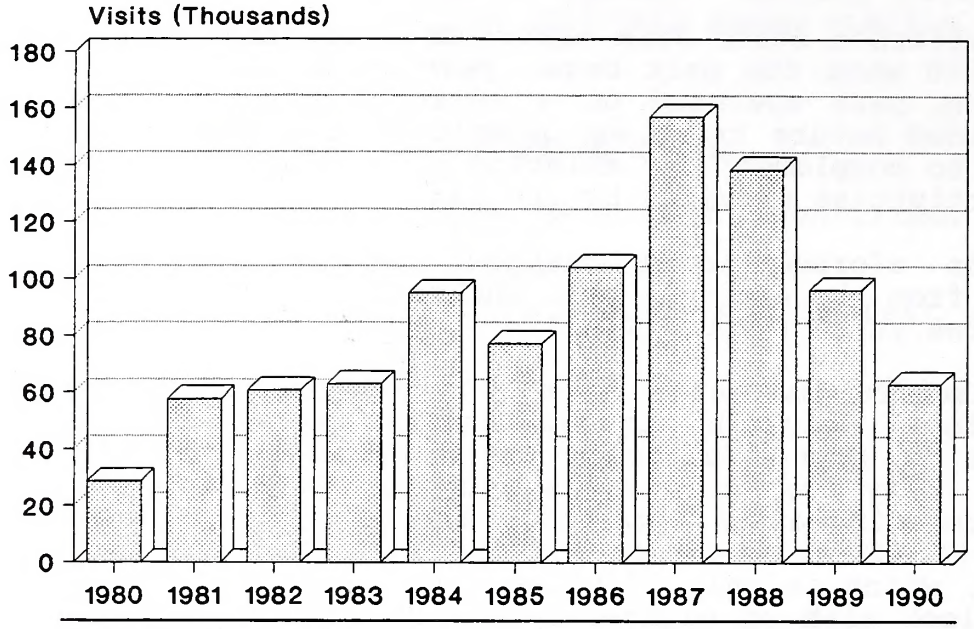



Figure IV-1. Mount Jefferson State Park Annual Visitation 1980 - 1990

## MONTHLY VISITATION
## 1990

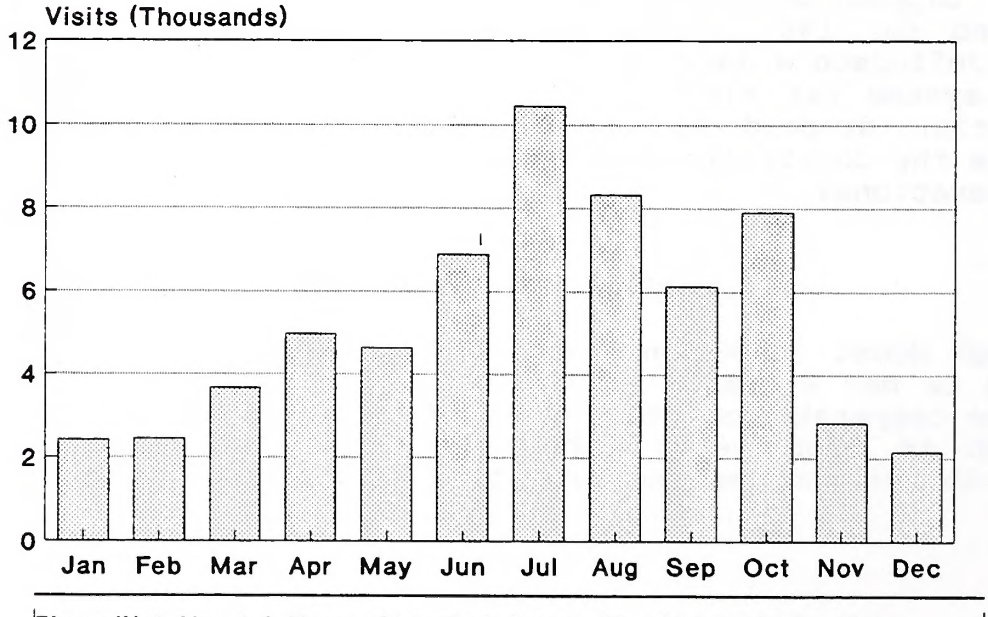



Figure IV-2. Mount Jefferson State Park Average Monthly Visitation 1990

Mount Jefferson State Park experiences its heaviest use from June through October. About 64 percent of the park's annual visitation occurs during this five-month period (Figure IV-2). Contributing to the high visitation during this period is Ashe County's popularity as an area for second home construction, as evidenced by the development along the New River.

Monthly visitation to Mount Jefferson State Park also increases substantially in July. This increase may be due to heavier visitation on the Blue Ridge Parkway and from the Christmas-in-July festival held annually in Ashe County. Local residents attend the festival, but the majority come from outside Ashe County. October is another month that experiences increased visitation. Visitors come to view the magnificent fall foliage from the park overlooks.

## POPULATION TRENDS

Mount Jefferson State Park is located in Ashe County, which has a total estimated population of 22,209 as of 1990. According to the census, the county population experienced a small decrease from 1980 to 1990. Furthermore, the population is projected to decrease again by the year 2000 (Figure IV-3). Although the county population continues to decrease, there is no correlation between this and park visitation, because park visitors are not typically county residents.

Ashe County has two incorporated towns within one-and-a-half miles of Mount Jefferson. The population of both towns, however, is less than 1500 each. The population growth of each town is expected to remain unchanged through the turn of the century, even though one of the towns -- Jefferson -- is the county seat.

## POPULATION BY AGE GROUP

The distribution of population according to age groups in Ashe County shows the 30- to 39-year-old age group to be the largest according to 1990 estimates. This group accounts for more than 15 percent of the total population (Figure IV-4).

The age group that experienced the most growth from 1980 to 1990, however, with projections for a steady growth to continue, is the 40- to 49-year-old age group. The 50- to 59-year-old age group had a small population increase during the 1980s, but the projections estimate an increase of over 16 percent by the year 2000.

In Ashe County, the number of people over 40 years old is increasing. These over-40 age groups account for 49 percent of the county's population, according to 1990 estimates, and will be an even larger percentage by the turn of the century.

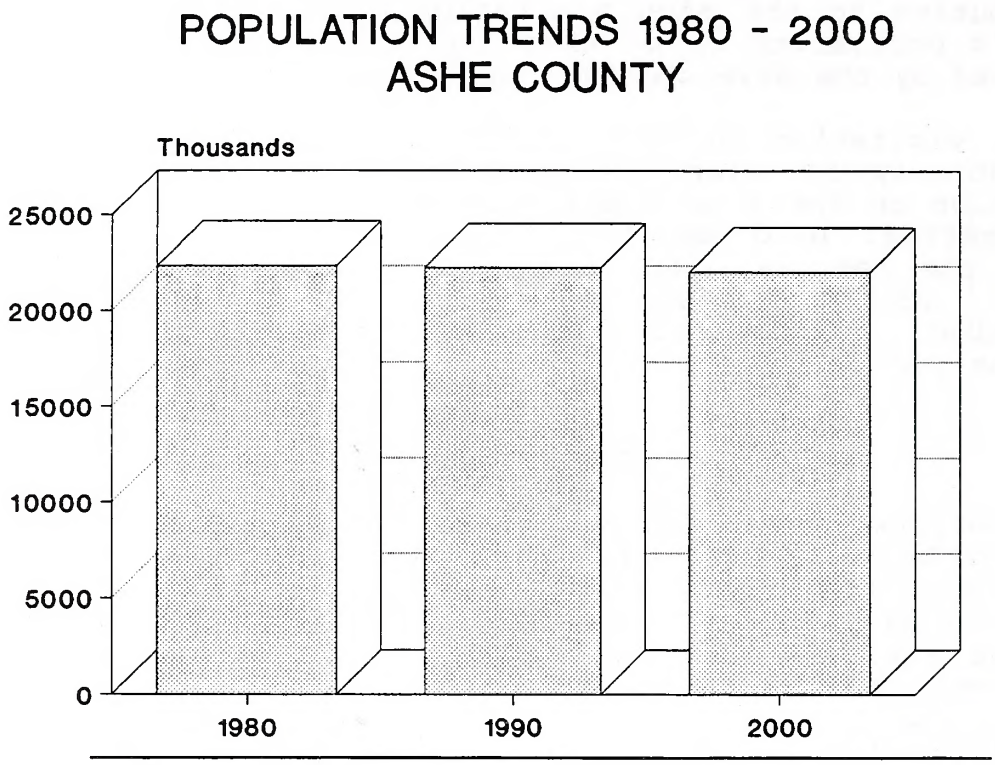



Figure IV-3. Population Trends for Ashe County

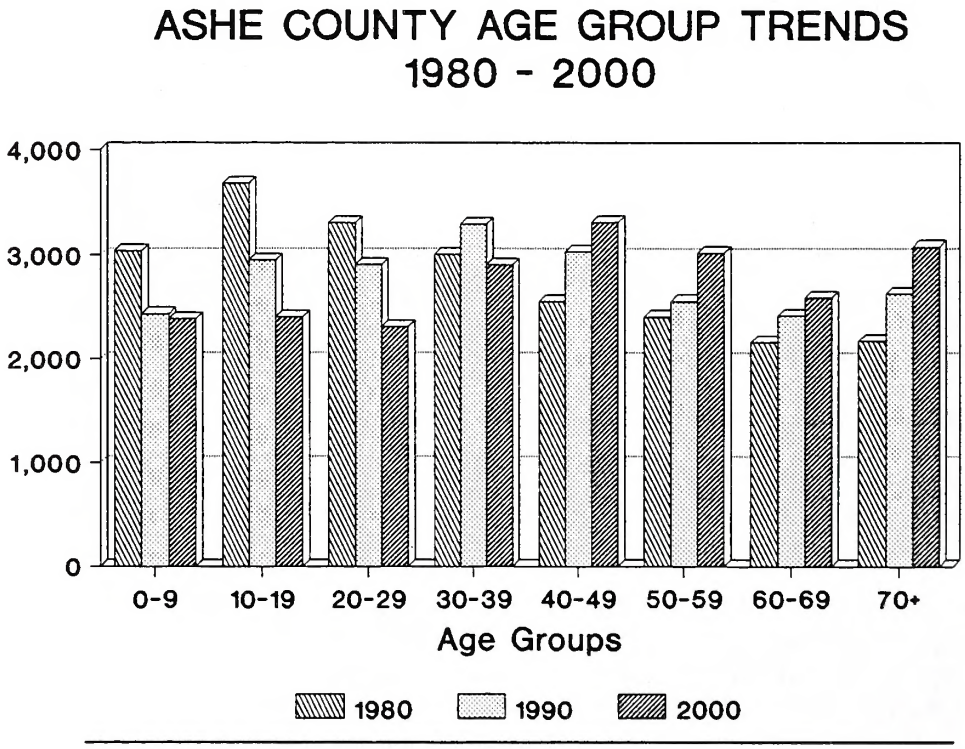



Figure IV-4. Mount Jefferson State Park Market Area Age Group Trends

The number of small children began a gradual decline in 1980, with 1990 projections showing a major decrease continuing to the year 2000. The other age-group populations under 40 will continue to decrease in numbers as well, according to population projections for 1990 and 2000.

## OUTDOOR RECREATION PARTICIPATION IN NORTH CAROLINA

The five most popular outdoor recreation activities in North Carolina are walking for pleasure, driving for pleasure, viewing scenery, beach activities, and visiting historical sites. Three out of every four households participated in walking for pleasure at least once in the past 12 months (Table IV-1). In addition to the five most popular activities, over fifty percent of the households responding to a 1989 survey participated at least once in the following activities: swimming (in lakes, rivers, or oceans), visiting natural areas, picnicking, attending sports events, visiting zoos, and freshwater fishing.

The North Carolina Outdoor Recreation Participation Survey was mailed to 3,100 randomly selected residents in the spring of 1989. Forty-five percent, or 1,399 people, returned completed surveys. Each person receiving the survey was asked to estimate the number of times the respondent's household members had participated in each of 43 activities.

**Table IV-1. Outdoor recreation activities ranked by popularity.**

| Rank | Activity | Percentage of Households Participating |
|---|---|---|
| 1. | Walking for Pleasure | 75% |
| 2. | Driving for Pleasure | 72 |
| 3. | Viewing Scenery | 71 |
| 4. | Beach Activities | 69 |
| 5. | Visiting Historical Sites | 62 |
| 6. | Swimming (in Lakes, Rivers, and Oceans) | 54 |
| 7. | Visiting Natural Areas | 53 |
| 8. | Picnicking | 52 |
| 9. | Attending Sports Events | 52 |
| 10. | Visiting Zoos | 51 |
| 11. | Fishing - Freshwater | 50 |
| 12. | Use of Open Areas | 41 |
| 13. | Swimming (in Pools) | 40 |
| 14. | Fishing - Saltwater | 38 |
| 15. | Attending Outdoor Cultural Events | 35 |
| 16. | Bicycling for Pleasure | 32 |
| 17. | Other Winter Sports | 31 |
| 18. | Camping, Tent or Vehicle | 29 |
| 19. | Softball and Baseball | 28 |
| 20. | Hunting | 28 |
| 21. | Use of Play Equipment | 28 |
| 22. | Power Boating | 26 |
| 23. | Trail Hiking | 26 |
| 24. | Jogging or Running | 24 |
| 25. | Basketball | 24 |
| 26. | Nature Study | 22 |
| 27. | Golf | 22 |
| 28. | Target Shooting | 20 |
| 29. | Water Skiing | 19 |
| 30. | Camping, Primitive | 14 |
| 31. | Tennis | 14 |
| 32. | Use Motorcycles, Dirt Bikes, ATV's | 13 |
| 33. | Use Four Wheel Drive Vehicles | 13 |
| 34. | Canoeing and Kayaking | 13 |
| 35. | Horseback Riding | 12 |
| 36. | Volleyball | 12 |
| 37. | Downhill Skiing | 12 |
| 38. | Football | 11 |
| 39. | Soccer | 7 |
| 40. | Sailboating | 7 |
| 41. | Skateboarding | 6 |
| 42. | Cross Country Skiing | 2 |
| 43. | Windsurfing | 1 |

## PRIORITIES OF PUBLIC OUTDOOR RECREATION FUNDING

The North Carolina Outdoor Recreation Survey also asked residents to identify and rank their unmet public outdoor recreation needs. Future demand was determined by asking them which activities they would have tried more often had adequate facilities been available. Respondents were then asked to rank these activities in order of importance. A scoring system was used assigning each activity a rating of high, moderate or low future demand based on the survey results.

In the second part of the analysis, the respondents' level of support for publicly funded outdoor recreation activities was determined by asking them to identify and rank those activities to which government should give highest priority when spending public money. The same scoring system used to analyze unmet demand was then applied to the survey results, with each activity receiving a high, moderate or low rating in public support for public funding.

In the final part of the needs analysis, the two ratings were combined for each activity, producing a score of one to nine that reflected both future demand and public funding priorities. The activities that ranked high in both future demand and support for public funding received the highest priority in the needs assessment (Table IV-2).

**Table IV-2. Scoring Matrix for Future Recreation Priorities**

| Future Demand | Public Support | | |
|---|---|---|---|
| | High | Moderate | Low |
| High | 1 | 3 | 6 |
| Moderate | 2 | 4 | 8 |
| Low | 5 | 7 | 9 |

Based on this analysis, many of the activities with high priority ratings are activities that are currently or could potentially be provided at Mount Jefferson State Park. The activities include picnicking, visiting natural area, viewing scenery, and trail hiking (Table IV-3).

**Table IV-3. Priorities of Future Outdoor Recreation Activities**

| Activity | Code |
|---|---|
| Walking for Pleasure | 1 |
| Camping, Tent or Vehicle | 1 |
| Picnicking | 1 |
| Beach Activities | 1 |
| Fishing - Freshwater | 1 |
| Attend Outdoor Cultural Events | 1 |
| Visiting Natural Areas | 2 |
| Use of Play Equipment | 2 |
| Visiting Zoos | 2 |
| Visiting Historical Sites | 2 |
| Bicycling for Pleasure | 3 |
| Swimming (in Pools) | 3 |
| Viewing Scenery | 4 |
| Hunting | 4 |
| Trail Hiking | 4 |
| Use of Open Areas | 4 |
| Target Shooting | 4 |
| Swimming (Lakes, Rivers, Ocean) | 4 |
| Fishing - Saltwater | 4 |
| Camping, Primitive | 7 |
| Driving for Pleasure | 8 |
| Horseback Riding | 8 |
| Golf | 8 |
| Attending Sports Events | 8 |
| Jogging or Running | 9 |
| Nature Study | 9 |
| Softball and Baseball | 9 |
| Basketball | 9 |
| Football | 9 |
| Soccer | 9 |
| Tennis | 9 |
| Volleyball | 9 |
| Skateboarding | 9 |
| Sailboating | 9 |
| Windsurfing | 9 |
| Canoeing and Kayaking | 9 |
| Power Boating | 9 |
| Water Skiing | 9 |
| Downhill Skiing | 9 |
| Cross Country Skiing | 9 |
| Other Winter Sports | 9 |
| Use Motorcycles, Dirt Bikes, ATV | 9 |
| Use Four-Wheel-Drive Vehicles | 9 |

## NEARBY PARK AREAS AND FACILITIES

Mount Jefferson State Park is noted for its 489 acres of natural beauty between the North Fork and the South Fork of the New River. Visitors can enjoy scenic vistas and colorful displays of mountain flora. The activities provided at Mount Jefferson in a natural setting are picnicking, trails, and nature study.

There are two state parks near Mount Jefferson State Park that offer a variety of alternative activities, both active and passive. New River State Park is only 10 miles away and is also accessible off the Blue Ridge Parkway. The New River is one of the oldest rivers in North America and provides three access points for fishing, picnicking, canoe access, primitive group camping, and trails.

Approximately 25 miles from Mount Jefferson State Park is the 14,434-acre Stone Mountain State Park, which can be viewed from an overlook on the Blue Ridge Parkway. This park provides a variety of activities, including camping, picnicking, fishing, hiking, nature study, horseback riding, and opportunities for rock climbing.

The Pisgah National Forest and the Cherokee National Forest in Tennessee and Virginia are other recreation areas within a 20-mile radius of Mount Jefferson State Park. Additionally, the Blue Ridge Parkway, which is approximately 16 miles from Mount Jefferson, has an overlook with interpretive signs pertaining to Mount Jefferson. There are several areas along the Parkway within 25 miles of Mount Jefferson State Park that provide various recreational opportunities. Doughton Park, the largest Parkway recreational area, has a campground, picnic area, hiking trails, fishing, restaurant, and lodge. Jeffress Park has a self-guiding trail to the Cascades waterfall and a picnic area.

Ashe County operates a 70-acre county park within 1.5 miles of Mount Jefferson. The park includes picnicking, an amphitheater, active recreational facilities, fishing, and boating. The park is heavily used by Ashe County residents because of the diversity of recreational opportunities. Because Ashe County provides a comprehensive county park and Mount Jefferson provides facilities for only picnicking and trails, it is easy to ascertain why Mount Jefferson's visitation is composed of residents from outside the county. The county residents can enjoy picnicking and trails in their county park, in addition to a broader range of recreational opportunities.

Because of state and federal park facilities located in Ashe County, SCORP standards do not indicate a need for additional regional park acreage or dispersed park acreage for Ashe County. Both categories are ranked above 100 percent in sufficiency for acreage for 1990 and 1995.

# V. SUMMARY OF LAWS GUIDING PARK MANAGEMENT

There are many federal and state statutes, state and federal executive orders, and administrative rules and policies that govern the operation of the state parks system. This chapter includes a brief discussion of the primary legal basis for the existence and operation of the state parks system.

## STATE LEGAL MANDATES

### NORTH CAROLINA CONSTITUTION

Article XIV, Section 5 of the North Carolina Constitution sets overall policy by broadly defining the conservation and protection of natural resources and the acquisition of such resources as a proper function of government. The amendment reads in part as follows:

> It shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina and its political subdivision to acquire and preserve park, recreation, and scenic areas, to control and limit the pollution of our air and water, to control excessive noise, and in every other appropriate way to preserve as a part of the common heritage of this state its forests, wetlands, estuaries, beaches, historical sites, open land, and places of beauty.

### STATE PARKS ACT

The State Parks Act (G.S. 113-44.7 through 113-44.14) sets forth a mission statement for the state parks system. It states that the system functions to preserve and manage representative examples of significant biologic, geologic, scenic, archaeologic, and recreational resources, and that park lands are to be used by the people of the state and their visitors and descendants in order to promote understanding of and pride in the state's natural heritage.

The State Parks Act also calls for development and periodic revisions of a System Plan to achieve the mission and purpose of the state parks system in a reasonable, timely, and cost-efficient manner. The Act describes System Plan components and requires that public participation be a component of plan development and revision.

The State Parks Act also calls for the classification of park resources and the development of general management plans (GMPs) for each park. GMPs are to include a statement of park purpose, an analysis of major resources and facilities, and a statement of management direction.

## POWERS AND DUTIES OF THE DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES

This act authorizes the Department to investigate the resources of the state and to take measures it deems best suited to promote the conservation and development of such resources. The Act also authorizes the Department to care for state forests and parks and other recreational areas now owned, or to be acquired by, the state. (G.S. 113-8)

## STATE NATURE AND HISTORIC PRESERVE DEDICATION ACT

The General Assembly passed the State Nature and Historic Preserve Dedication Act in 1973 to "prescribe the conditions and procedures under which properties may be specifically dedicated for the purposes enumerated by Article 14, Section 5 of the North Carolina Constitution (Conservation of Natural Resources)" (G.S. 143-260.6 to 143-260.10). A three-fifths majority of the General Assembly is required to add or remove land from a state nature and historic preserve. The 489-acre Mount Jefferson State Park is dedicated into the State Nature and Historic Preserve.

## NORTH CAROLINA ENVIRONMENTAL POLICY ACT OF 1971

Recognizing the profound influence that man's activity has on the natural environment, the General Assembly passed the Environmental Policy Act "to assure that an environment of high quality will be maintained for the health and well-being of all..."

The Act declares that:

> It shall be the continuing policy of the State of North Carolina to conserve and protect its natural resources and to create and maintain conditions under which man and nature can exist in productive harmony. Further, it shall be the policy of the State to seek, for all its citizens safe, healthful, productive, and aesthetically pleasing surroundings; to attain the widest possible range of beneficial uses of the environment without degradation, risk to health or safety; and to preserve the important historic and cultural elements of our common inheritance. (G.S. 113A-3)

While there are other General Statutes that concern the state parks system and the environment, the above-described statutes, along with Article XIV, Section 5 of the North Carolina Constitution, largely define the purposes of the state parks system and serve to guide the operation of state park system units.

## FEDERAL LAWS

### LAND AND WATER CONSERVATION FUND ACT OF 1965

The federal Land and Water Conservation Fund Act (PL 88-578) offers protection and places restrictions on fund-assisted outdoor recreation areas.

By virtue of receiving Land and Water Conservation Fund (LWCF) grant assistance, most of the state parks system, including Mount Jefferson State Park, is subject to LWCF rules and regulations. Property acquired or developed in whole or in part with LWCF assistance cannot be converted to other than public outdoor recreation use without federal approval. A conversion may only take place if approved by the secretary of the Interior, and only then if replacement property of equal fair market value and reasonably equivalent usefulness and location is made.

LWCF requirements include: programming, operating and maintaining areas in a manner that encourages public participation; maintaining the property so it appears attractive and inviting to the public; maintaining property, facilities and equipment to provide for public safety; keeping facilities, roads, trails and other improvements in reasonable repair throughout their lifetime to prevent undue deterioration and encourage public use; keeping the park and facilities open for use at reasonable hours and times; and making future development meet LWCF rules and regulations. LWCF-assisted sites are periodically inspected by state and federal inspectors to ensure compliance with LWCF requirements.

## STATE POLICIES

### STATE PARKS SYSTEM MISSION STATEMENT

> The North Carolina state parks system exists for the enjoyment, education, health and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features and recreation resources of statewide significance; to provide outdoor recreation opportunities in a safe and healthy environment; and to provide environmental educational opportunities that promote stewardship of the state's natural heritage.

While the mission statement itself has no legal authority, it was written to concisely express the purposes for which the system exists. These purposes are legally mandated by many sources, including the North Carolina Constitution and state statutes, some of which have been highlighted above.

## MOUNT JEFFERSON STATE PARK
## PRELIMINARY MASTER PLAN

A master plan for Mount Jefferson State Park was developed but never formally approved. This preliminary master plan recommended that the park become a state natural area. A review of the plan to determine if it should be formally approved is needed within the next five years.

## SITE CLASSIFICATION

Because of the natural significance of the area, the environmental impact of further development, and the limited potential for further development, it is recommended that the classification of Mount Jefferson State Park be changed from a state park to a state natural area.

# VI. NATURAL AND CULTURAL RESOURCE MANAGEMENT

## NATURAL COMMUNITIES

The mature, virtually untouched natural communities on Mount Jefferson exemplify many of the communities of the Blue Ridge Mountains, even though Mount Jefferson is west of the range. The slopes below 4,000 feet were once dominated by American chestnut (Castanea dentata), but now exemplify the natural communities that have succeeded the chestnut forest. Mount Jefferson rises over 1,600 feet above the surrounding landscape.

The communities described below follow the Classification of the Natural Communities of North Carolina: Third Approximation (Schafale and Weakley, 1990).

### CHESTNUT OAK FOREST

The southwest-facing slopes of the major ridge west of Luther Rock have a well-developed example of this community type dominated by chestnut oak (Quercus montana). Red oak (Q. rubra), white oak (Q. alba), and red maple (Acer rubrum) are present in low numbers, with lesser amounts of scarlet oak (Q. coccinea), hickories (Carya spp.), and black gum (Nyssa sylvatica). Understory species include sourwood (Oxydendrum arboreum), sassafras (Sassafras albidum), chestnut sprouts (Castanea dentata), witch-hazel (Hamamelis virginiana), dogwood (Cornus florida), and red maple. The ericaceous-dominated shrub layer includes mountain laurel (Kalmia latifolia), Catawba rhododendron (Rhododendron catawbiense), flame azalea (R. calendulaceum), minniebush (Menziesia pilosa), mountain holly (Ilex montana), dwarf hazelnut (Corylus cornuta), and swamp doghobble (Leucothoe racemosa). The sparse herb layer includes galax (Galax urceolata), trailing arbutus (Epigaea repens), dwarf iris (Iris cristata), and pink ladyslipper (Cypripedium acaule).

### HEATH BALD

A variant of this community type occurs on the southern part of the summit at Luther Rock Overlook. The area is dominated by shrubs, including Catawba rhododendron, mountain laurel, black chokeberry (Sorbus melanocarpa), deerberry (Vaccinium stamineum), mountain highbush blueberry (V. constablaei), and mountain sweet-pepperbush (Clethra acuminata). The thin soils of this community grade into the exposed rock of the High Elevation Rocky Summit community. There is a scattering of stunted trees, including red oak, white oak, black locust (Robinia pseudo-

acacia), mountain ash (Sorbus americana), and a few chestnut sprouts. A small stand of bigtooth aspen (Populus grandidentata) that formerly was located here has died, with only a remnant skeleton of a tree as a reminder.

## HIGH ELEVATION RED OAK FOREST

Much of the summit and ridgetops on Mount Jefferson are covered with this community, which is dominated by red oak to 20" in diameter. Chestnut oak, white oak, black locust, white ash (Fraxinus americana), yellow birch (Betula alleghaniensis), red maple, and sugar maple (Acer saccharum) are also common. Red oak is the single dominant species in most areas, forming a somewhat open canopy. Occasional chestnut sprouts are a reminder of the previous canopy dominant. Striped maple (A. pensylvanicum), mountain maple (A. spicatum), mountain holly, witch-hazel, and a mixture of other small trees and shrubs compose the understory and shrub layers. Several white pine (Pinus strobus) seedlings have recently appeared in the understory on the summit. Roan rattlesnakeroot (Prenanthes roanensis) is most notable in the herb layer.

## HIGH ELEVATION ROCKY SUMMIT

This community type is well represented at Luther Rock and several other large rock outcrops on Mount Jefferson. The bare rock and limited soil support a variety of plants in various microsites. At Luther Rock the community grades into Heath Bald, while sites on the north side grade into High Elevation Red Oak Forest and other forest communities. Scattered, stunted trees, including Canada hemlock (Tsuga canadensis) and bigtooth aspen occur on the north side of the mountain. A small colony of rusty woodsia (Woodsia ilvensia) and golden tundra-moss (Rhytidium rugosum) is notable at Luther Rock. In addition to the bigtooth aspens on the north and west sides, Carolina saxifrage (Saxifraga caroliana), Roseroot (Sedum rosea), and twisted spikemoss (Selaginella tortipila) are notable.

## MONTANE WHITE OAK FOREST AND MONTANE OAK-HICKORY FOREST

The lower slopes of the drier ridges appear to grade into these two communities, with white oak being prominent in both. Most of these communities are outside of the park.

## NORTHERN HARDWOOD FOREST (TYPIC SUBTYPE)

An exemplary representative of this community is located on the north side of Mount Jefferson and straddles the park boundary.

On the upper end the community grades into High Elevation Red Oak Forest and on the lower end grades into Rich Cove Forest. Usually this community is dominated by American basswood (Tilia americana var.heterophylla), but the area dominated by this species is limited, and, overall, the canopy is dominated by a mixture of mesophytic species, including sugar maple, beech, yellow birch, and black cherry (Prunus serotina). Red oak, red maple, shagbark hickory (Carya ovata), pignut hickory (C. glabra), bitterNut hickory (C. cordiformis), black locust, white ash, yellow buckeye (Aesculus flava), chestnut oak, tuliptree, and black walnut (Juglans nigra) are also present. Understory species include striped maple, mountain maple, witch-hazel, cucumber tree (Magnolia acuminata), fringe tree, and chestnut sprouts. Shrub species include Catawba rhododendron, great laurel (Rhododendron maximum), mountain laurel, wild hydrangea (Hydrangea arborescens), mountain holly, and common wild azalea (R. periclymenoides). The diverse herb layer includes a large population of trailing wolfsbane (Aconitum reclinatum), monkshood (A. uncinatum), and ginseng (Panax quinqefolius). The streams draining the cove are rich with liverworts, mosses, and lower vascular plants. The area also appears to be a rich amphibian site, with northern dusky salamander (Desmognathus fuscus) identified in 1991.

## RICH COVE FOREST

The broad cove on the south side of the mountain, east of the park office, is a striking variant of this community type. Much of the community is outside the park boundary. The canopy dominants are white ash with large diameters, with scattered tuliptree, American basswood, and black locust. Understory and shrubs are sparse but include hawthorns (Crataegus spp.), dogwood, ironwood, hop-hornbean (Ostrya virginiana), spicebush (Lindera benzoin), and mountain holly. In July, the herb layer is dominated by yellow jewelweed (Impatiens pallida) to 5 feet tall. Other species noted were black cohosh (Cimicifuga racemosa), Roan snakeroot (Ageratina altissima var. roanensis = Eupatorium rugosum), southern harebell (Campanula divaricata), lopseed (Phryma leptostachys), sweet Indian-plaintain (Cacalia suaveolens), honewort (Cryptotaenia canadensis), fragrant bedstraw (Galium triflorum), Jack-in-the-pulpit (Arisaema triphyllum), and hemp-nettle (Galeopsis tetrahit).

## NATURAL HERITAGE PROGRAM ELEMENT OCCURRENCES

### TRAILING WOLFSBANE (Aconitum reclinatum)

This species has a status of Candidate with the Plant Conservation Program. A very large population (estimated at over 20,000 plants) is located in the Northern Hardwood Forest in the moist cove on the north side of the mountain. This population may extend beyond the park boundary. The population is mostly within 100 feet of the boulder streams that drain the north side of the mountain. Among the associates in this extremely rich, diverse community is the sister species, monkshood (A. uncinatum).

### A LIVERWORT (Barbilophozia barbata)

This species has a status of Significantly Rare with the Natural Heritage Program. This liverwort was collected from the summit of the mountain circa 1953, and no further information was given. General habitat for the species is listed as high elevation rocky summits. Additional inventory is needed for verification.

### HAY SEDGE (Carex argyrantha)

This species has a status of Significantly Rare with the Natural Heritage Program. This sedge species was collected in 1950 from rocky open soil on the summit of the mountain. General habitat for the species is listed as wet meadows. Additional inventory is needed for verification.

### PLAINS SUNROSE (Helianthemum bicknellii)

This species has a status of Candidate with the Plant Conservation Program. A specimen of this species was collected in September 1958 with the location listed as "bald on Mount Jefferson." The species is known from five mountain counties in a variety of habitats, including rock outcrops, glades and fens. Although there have been no subsequent reports of the species, it may still be found with additional inventory.

### CREEPING SUNROSE (Helianthemum propinquum)

This species has a status of Candidate with the Plant Conservation Program. A specimen of this species was collected in 1958. The location was listed as "bald on Mount Jefferson." The species is known from eight mountain counties in a variety of habitats, including rock outcrops and glades. Although there have been no subsequent reports of the species, it may reappear with additional inventory.

## FIR CLUBMOSS (*Huperzia selago*)

This species has a status of Significantly Rare with the Natural Heritage Program. Fir clubmoss was identified in 1991 in the High Elevation Rocky Summit community at the upper overlook. Currently, the species is known from only 10 mountain counties in North Carolina.

## A LIVERWORT (*Lophozia excisa*)

This species has a status of Significantly Rare with the Natural Heritage Program. This liverwort was collected from the summit of the mountain in 1953. General habitat for the species is listed as high elevation rocky summits, and Ashe County is the only location in North Carolina currently reported. Additional inventory is needed for verification.

## TREE GROUND-PINE (*Lycopodium dendroideum*)

This species has a status of Significantly Rare with the Natural Heritage Program. A small population of this species was identified in 1991 growing on the fringe of the rock outcrop at the upper overlook. Closest associates included twisted-hair spikemoss (*Selaginella tortipila*), fir clubmoss, silverling (*Paronychia argyrocoma*), and pineweed (*Hypericum gentianoides*).

## GINSENG (*Panax quinquefolius*)

This species is listed as Special Concern with the Plant Conservation Program and considered Significantly Rare by the Natural Heritage Program. A fairly large population of ginseng exists in the Northern Hardwood Forest community on the north side of the mountain extending beyond the park boundary. Scattered plants are also reported to occur nearer the summit on the rich northeast-facing slopes as well as elsewhere in the park.

## BIGTOOTH ASPEN (*Populus grandidentata*)

This species is on the Watch List of the Plant Conservation Program. The historical population below Luther Rock Overlook is now dead, with only a skeleton dead tree as a reminder. Two previously undocumented populations are present on the north side of the mountain. These populations are located in shallow soil on the fringe of a High Elevation Elevation Rocky Summit community. One population has 50-100 stems present ranging up to 8 inches in diameter. It is likely that all or most of the stems are clonal. Many of the stems have cankers caused by an unknown pathogen.

A second population of larger trees with diameters of 12 inches or more is located nearby. This generally west-facing population has fewer than 50 stems, and most of the mid-range stems have the cankers observed in the other population. Although it has not been verified, a third small population is believed to exist on a more northeast-facing slope.

Division staff are investigating the cause of the canker on the populations. Additional information is needed on the biology of the species on Mount Jefferson.

### ROAN RATTLESNAKEROOT (Prenanthes roanensis)

This species is considered Significantly Rare by the Natural Heritage Program. Roan rattlesnakeroot is present in the High Elevation Red Oak Forest on the summit from the picnic area to Luther Rock. About 50 plants were seen in 1986 and 100 plants were in flower in 1991.

### GOLDEN TUNDRA-MOSS (Rhytidium rugosum)

This species is considered Significantly Rare by the Natural Heritage Program. Golden tundra-moss was first reported from Mount Jefferson in September 1937 and verified in July 1986. It covers about 20 square meters at Luther Rock in soil generally less than 1 centimeter thick around the edges of amphibolite outcrops where the High Elevation Rocky Outcrop community is located. An additional small population may be found on outcrops on the north side of the mountain. The species is known from only five mountain counties in North Carolina. Additional inventory is needed to verify and determine the quantity.

### CAROLINA SAXIFRAGE (Saxifraga caroliniana)

This species is a Candidate for listing with the Plant Conservation Program. Carolina saxifrage was reported from Mount Jefferson in 1879, but no specifics on the habitat were given. The specimen was annotated in 1981. The general habitat for the species is listed as high to middle elevation moist cliffs and rock outcrops, and that habitat is present on the north face of the mountain. Additional inventory is needed to determine the current status of the species.

### ROSEROOT, KING'S CROWN (Sedum rosea var. roanensis)

This species is listed as Endangered with the Plant Conservation Program. A small population of this species was identified in 1991 on a northwest-facing outcrop in the High Elevation Rocky

Summit community near the upper overlook. Two small areas of less than 1 square foot each were noted on the edge of extremely shallow soil. Close associates include silverling, mountain spleenwort (Asplenium montanum), Michaux's saxifrage (Saxifraga michauxii), wavy hairgrass (Deschampsia flexuosa), pinweed (Lechea racemulosa), columbine (Aquilegia canadensis), and live-for-ever (Sedum telephioides).

### TWISTED-HAIR SPIKEMOSS (Selaginella tortipila)

This species is on the Watch List with the Plant Conservation Program. Twisted-hair spikemoss was identified in September 1991 on several of the rock outcrops in the High Elevation Rocky Summit community near the upper overlook. The species occurs in small crevices with minute accumulations of soil and/or humus.

### BOG GOLDENROD (Solidago uliginosa)

This species is considered Significantly Rare by the Natural Heritage Program. This species was collected in 1958 from mixed deciduous forest on Mount Jefferson. The species has not been verified in the park since that occurrence. The general habitat for the species is listed as bogs and seeps, however, and seeps and moist areas are common on the slopes of Mount Jefferson. Additional inventory is likely to refind the species.

### A LIVERWORT (Tritomaria exsectiformis ssp. exsectiformis)

This species is a Candidate for listing with the Plant Conservation Program. This liverwort was collected from Mount Jefferson at about 4,200 feet circa 1953. General habitat for the species is listed as high elevation rocky summits. This 1953 collection is the only documented report of the species in North Carolina. This would be the southernmost report of the species and a disjunct from Pennsylvania. Additional inventory is needed for verification and documentation.

### RUSTY CLIFF FERN (Woodsia ilvensis)

This species is considered Significantly Rare by the Natural Heritage Program. Rusty cliff fern is currently known from only two counties in North Carolina. It was first reported from Mount Jefferson in 1842. The species was subsequently collected in 1935 and in 1939. The species was verified in the park at Luther Rock in 1986 and 1988. Habitat at Luther Rock is in crevices of amphibolite, associated with golden tundra-moss, rock spikemoss (Selaginella rupestris), and live-for-ever. This species is susceptible to visitor trampling at the Luther Rock.

## COOPER'S HAWK (*Accipiter cooperii*)

This species is listed as Special Concern with the Natural Heritage Program. Cooper's hawk is frequently observed at Mount Jefferson according to park staff. Nesting/breeding habitat is available in the park, but there are no confirmed sightings of nests. Additional inventory and monitoring are needed to determine the status of this bird species.

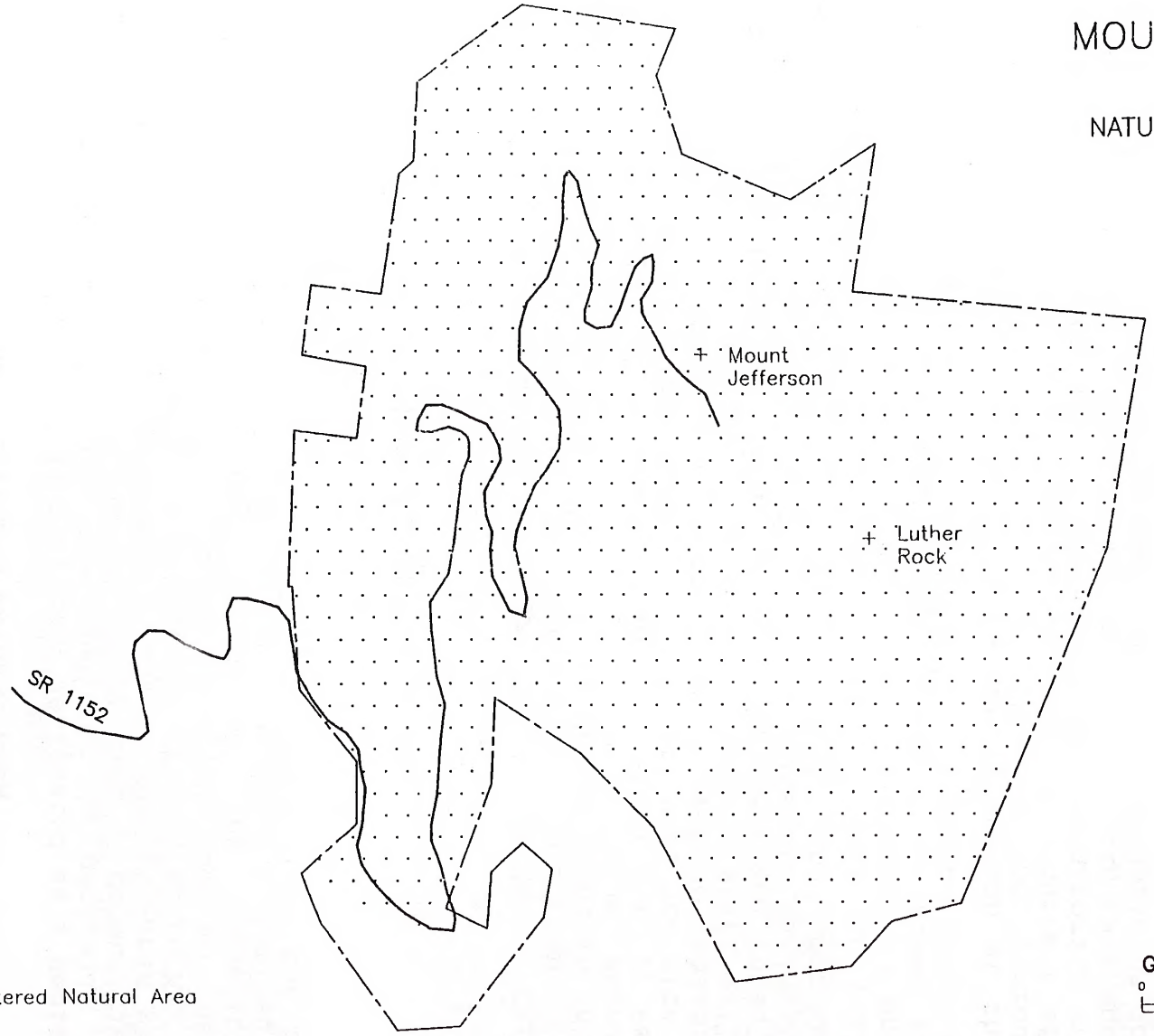
## COMMON RAVEN (*Corvus corax*)

This species is listed as Significantly Rare with the Natural Heritage Program. Ravens are frequently seen in the park. Potential breeding habitat does exist on the rock cliffs on the north side of the mountain, but nesting has not been confirmed in 10 years. Additional inventory and monitoring are needed to determine the status of this bird species.

## A MILLIPEDE (*Dixioria dactylifera*)

This species is listed as Significantly Rare with the Natural Heritage Program. This millipede was collected in 1976 in the park, but no specifics are given in the report. Additional inventory is needed to verify and document this species.

# MOUNT JEFFERSON
## STATE PARK
## NATURAL HERITAGE AREAS




**LEGEND**

Registered Natural Area

**GRAPHIC SCALE**

0 500' 1000'

## REGISTERED NATURAL HERITAGE AREAS

### MOUNT JEFFERSON NATURAL AREA

Virtually all of the park is currently designated as a Registered Natural Heritage Area, and the condition is generally good. Trampling in the High Elevation Rocky Summit communities is taking a toll on the fragile vegetation and may threaten several of the rare species, such as the rusty cliff fern at Luther Rock. The current informal trail from the upper overlook on the road down to the cave is causing damage to existing vegetation and erosion of the shallow and steep soils even with limited use. Use of this trail should be limited to groups under the supervision of park staff.

## RESOURCE MANAGEMENT ISSUES

### TOWER SITE

The use of the top of Mount Jefferson by the North Carolina Division of Forest Resources pre-dates the establishment of the park. The deed to the State for the top of the mountain includes the use of the tower site by the Division of Forest Resources, Division of Parks and Recreation, and the State Highway Patrol. Ashe County public safety communications also uses the site. The multitude of antennas has created public safety hazards and adversely impacts the park's resources. Division staff will work with existing users to remove unauthorized users and consolidate legal users to mitigate public safety hazards, minimize the negative impacts on the park's resources, and improve the aesthetics of the mountain top.

### VISTA MANAGEMENT

The park staff is currently managing the vegetation at the two overlooks to maintain the current views of the surrounding landscape. The park staff should continue their current efforts to manage the vegetation at the overlooks. Monitoring of the vegetation management areas should be done to avoid rare species. No clearing of vegetation for additional vistas should be done.

### HURRICANE DAMAGE

Hurricane Hugo of 1989 left some downed trees and other timber damage in the park. Hazard trees near facilities have been cut or removed. Remaining trees and branches may pose a minor fire hazard, but in the three years since the hurricane, much of the

fine fuel has decomposed. The impact of removing standing dead trees near trails on the natural communities in this park needs to be investigated further.

## POWERLINE RIGHT-OF-WAY

Currently, an overhead powerline goes to the top of Mount Jefferson. The right-of-way for this powerline is cleared by mechanical methods at this time. Only mechanical means of maintaining rights-of-way should be used within the boundaries of the park. With the number and quality of natural communities and rare species within the park, the use of herbicides would adversely impact the natural resources of the park.

## BOUNDARY LINES

Many of the boundary lines at Mount Jefferson have been the same for many years. Past inattention to boundary lines has resulted in sections being lost. Subdivision development is now occurring around the park, which has increased the need to know the location of boundaries. Surveying to relocate these missing sections is needed.

## VISITOR IMPACTS

Signs of visitor impacts are found at Luther Rock and along the trails on the top of the mountain. Trampling of vegetation and erosion at heavily used areas has occurred. Monitoring of the resources that are easily accessible by park visitors should be done if staff time allows. Closing sections of the park may be necessary if visitor impacts are too great. The impact of bringing visitors into fragile natural communities or near rare species needs to be considered if additional trails are recommended. Environmental review will be required for all trail work.

## NATURAL HERITAGE INVENTORY

A detailed natural heritage inventory is needed for Mount Jefferson. Vascular and non-vascular plants and animals need comprehensive inventory work. This inventory work would form the baseline data necessary for a monitoring program to assess the changes to the natural resources of the park.

## GYPSY MOTH

The gypsy moth (Lymantria dispar) is an exotic insect that is working its way south. The park staff are currently monitoring for the presence of this species. Both the gypsy moth itself and efforts to control it have the potential to affect the park's natural communities. An inventory of native lepidoptera in the park is needed to determine what is present. The survey information will assist staff in deciding on the gypsy moth management practices that would have the least amount of impact on the park's native lepidoptera populations.

## RARE PLANT AND ANIMAL SPECIES

Mount Jefferson has exemplary natural communities that contain rare plant and animal species. Impacts on the natural communities and rare species need to be assessed prior to any new facility work or trail realignment or establishment. The status of rare plant populations and/or the nesting/breeding activity of ravens or Cooper's hawk needs to be documented through the weekly I & E report.

## RESOURCE MANAGEMENT PLAN

A resource management plan for the park needs to be developed to address these issues and other resource management issues. A resource management plan should include detailed alternative actions and their implementation to address, prevent or correct the different resource threats or issues. The addition of district resource management specialists would facilitate the development of this plan.

# VII. PHYSICAL PLANT INVENTORY

## FACILITY INVENTORY AND INSPECTION PROGRAM

The buildings in state parks are needed for park operations and visitor services. These buildings and facilities are essential components of protecting the public's health and safety. They include facilities providing safe drinking water, restrooms, and electricity, as well as recreation facilities such as bathhouses, group camps, and cabins. Without proper maintenance, these facilities are, at best, a disservice to the citizens who use them, and at worst, potentially harmful.

The Facility Inventory and Inspection Program (FIIP) is a computer-based system used to track the condition, maintenance needs, and repair costs of every building in the state parks system. A principal objective of FIIP is to identify deficiencies that may affect health, fire, or life safety. Other objectives are to identify accessibility deficiencies and other significant maintenance-related deficiencies.

During a field evaluation of each facility, deficiencies are given priority ratings of critical, serious, or minor. The deficiencies are classified in nine basic categories: site (the grounds and walkways surrounding the building); exterior envelope; interior envelope; fire/life safety; handicapped accessibility; public health; heating/ventilation/air conditioning (HVAC); plumbing; and electrical.

The field evaluation begins with an inventory of all structures in the park (Figure VII-1). The results of the inventory are presented using the building name and state property numbers as identification. Next, the types of repairs and repair costs are listed for each building. Finally, the cost summary for the park is given using the nine basic categories of repairs (e.g. exterior envelope) and the three levels of deficiencies (critical, serious, and minor).

### MOUNT JEFFERSON STATE PARK BUILDING INVENTORY

| CODE | BUILDING NAME | IN USE |
|---|---|---|
| 013001 | Maintenance/Service | Y |
| 013002 | Toilet Building | Y |
| 013003 | Pumphouse | Y |
| 013004 | Vollmer House | Y |
| 013005 | Leland House | Y |
| 013006 | Tractor Shed | Y |
| 013007 | Well House | Y |

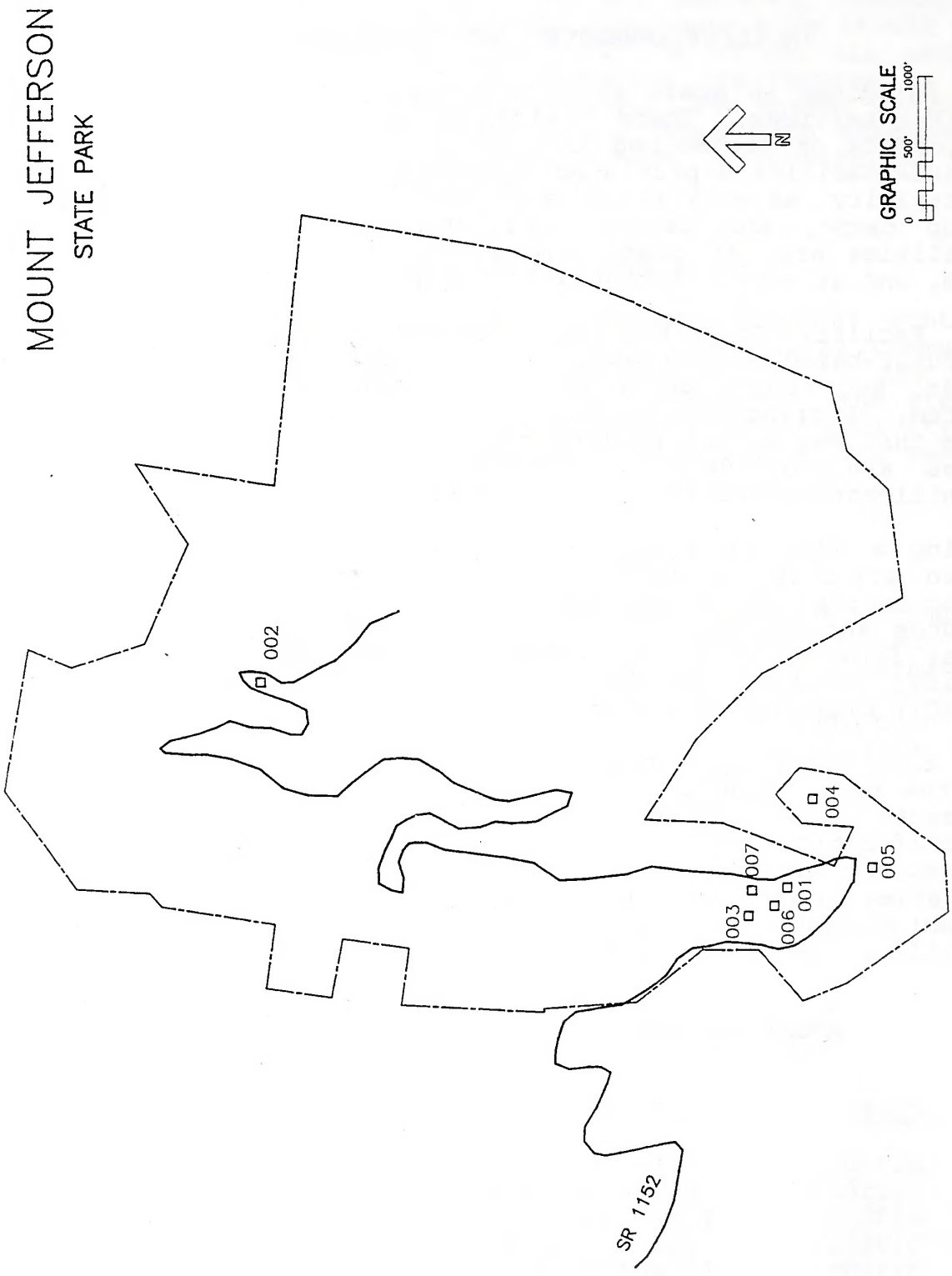



Figure VII-1. Building Inventory

## FACILITIES INSPECTION AND IMPROVEMENT

Of the five building at Mount Jefferson, one requires only very minor work, and two showed no deficiencies at all. The remaining two are recently acquired residences. One of these requires work totalling over $10,000; the other requires approximately $8,000. The staff has done an excellent job maintaining existing building and upgrading acquisitions with available monies. Only buildings requiring work are included in this report.

| Bldg. # | Building Name/Need | Repair Cost |
|---|---|---|
| 013001 | **Maintenance and Service** | **$ 463.00** |
| | Patch crack in foundation wall at loading dock | 150.00 |
| | Provide H/A parking spaces | 152.00 |
| | Trim tree limbs from roof | 162.00 |
| 013004 | **Vollmer House** | **$10,095.00** |
| | Add lighting | 1,500.00 |
| | Patch cracks in foundation | 150.00 |
| | Replace undersized posts & add braces | 300.00 |
| | Replace rotting sill log | 2,000.00 |
| | Add forced air gas heat | 5,142.00 |
| | Replace missing gutter | 105.00 |
| | Add carpet in loft | 900.00 |
| 013005 | **Leland House** | **7,912.00** |
| | Replace damaged chimney & liner | 4,725.00 |
| | Replace roof felt, drip edge & shingles | 3,000.00 |
| | Replace undersized wastewater vent | 187.00 |
| | **TOTAL:** | **$18,471.00** |

## FACILITY REPAIR NEEDS COST SUMMARY

| DEFICIENCY CATEGORY | PRIORITY 1 (CRITICAL) | PRIORITY 2 (SERIOUS) | PRIORITY 3 (MINOR) | CATEGORY SUBTOTAL |
|---|---|---|---|---|
| SITE | 0 | 162 | 0 | 162 |
| EXTERIOR ENVELOPE | 4725 | 5598 | 105 | 10428 |
| INTERIOR ENVELOPE | 0 | 0 | 900 | 900 |
| FIRE/LIFE SAFETY | 0 | 0 | 0 | 0 |
| HANDICAPPED ACCESS | 0 | 152 | 0 | 152 |
| PUBLIC HEALTH | 0 | 0 | 0 | 0 |
| HVAC | 0 | 5142 | 0 | 5142 |
| PLUMBING/UTILITY | 0 | 0 | 188 | 188 |
| ELECTRICAL | 0 | 1500 | 0 | 1500 |
| | 4725 | 12553 | 1193 | 18471 |

Deficiencies that are a threat to fire and life safety or the health of an individual are considered to be "critical." A "serious" deficiency is one that is not considered a threat to fire and life safety, but which could cause further damage to the structure if left uncorrected. This category usually includes building code violations. "Minor" deficiencies are those requiring general maintenance and repair.

## ROAD AND UTILITY INVENTORY

This inventory is divided into five major sections: roads and parking areas; water system; electrical system; sewer system; and telephone system. Each section has two parts, existing conditions and system recommendations. A complete report of each utility is presented in Appendix B.

Information for this inventory is based on an inspection of the park utilities in November 1991 as well as on information from the Institute for Transportation Research and Education's (ITRE) study on roads, original construction drawing, and Division staff.

### EXISTING CONDITIONS - ROADS AND PARKING AREAS

According to the ITRE study completed in March 1990, there are 1.98 miles of paved roads and .29 miles of unpaved roads within the park. Parking areas include 3,918 square yards of paved parking areas and 715 square yards of unpaved parking areas.

Although the roads and parking areas were resurfaced in 1981 and are in fair shape, the road surface is beginning to wear out, with slight to moderate ravelling due to extreme weather conditions and the steep grade. There is also slight to moderate block and transverse cracking beginning to show.

### RECOMMENDATIONS FOR ROADS AND PARKING AREAS

The existing annual service maintenance agreement with the N.C. Department of Transportation is adequate for maintenance of the park roads. The transverse cracking needs to be sealed by DOT, and the road and parking areas should be resurfaced in three to five years.

### EXISTING CONDITIONS - SEWER SYSTEMS

There are four different sewer systems at Mount Jefferson State Park, each under 1,200 gallons in capacity. Each system has its own septic tank with drainfields.

Summit Area Toilet Building - The sewer system was installed in 1958 and has never been pumped out. The exact location of the drainfield and septic tank are unknown. The drainfield area is overgrown with trees.

Maintenance and Service Sewer - This system was installed in 1968 and has never been pumped out. The drainfield is overgrown with trees, and the septic tank does not have a riser.

Two Residential Systems - Although the age and size of these systems are unknown, they both appear to be working.

## RECOMMENDATIONS FOR THE SEWER SYSTEMS

Summit Area Toilet Building - Pump out the septic tank and install a riser. Locate the drainfield and clear it of trees.

Maintenance and Service Drainfield - Pump out tank and install risers. Clear trees from drainfield.

Two Residential Systems - Pump out the septic tanks and install risers at each.

## EXISTING CONDITIONS - WATER SYSTEM

The summit area, park office, maintenance area, and two residences are supplied water by a six-gallon per minute well 200 feet from the park office. The well became the primary park water source when the new water distribution system was completed in 1992. A new two-gallon per minute well was established in 1991 to serve as a backup system.

## RECOMMENDATIONS FOR THE WATER SYSTEM

The present system is adequate.

## EXISTING CONDITIONS - ELECTRICAL DISTRIBUTION SYSTEM

The park is served electrical power by the Blue Ridge Electric Membership Corporation (BEMCO), which owns all distribution lines within the park. Overhead power lines in the park provide service to park facilities. The summit area toilet building is not provided electrical power.

## RECOMMENDATIONS FOR ELECTRICAL SYSTEM

Provide underground power lines to the summit area toilet building. Although the existing overhead lines should be placed underground according to park standards, the estimated cost for underground lines is not justifiable due to the limited planned development for the park. BEMCO will maintain the present lines at no cost to the park.

## EXISTING CONDITIONS - TELEPHONE DISTRIBUTION SYSTEM

The park is served by the Central Telephone Company. One telephone is currently located at the park office, and two residences have telephone service. A pay telephone is also located at the park office. There are no lines at the top of the mountain. The park's emergency radio repeater is served by phone lines at the top of the mountain.

RECOMMENDATIONS FOR THE TELEPHONE SYSTEM

Rebury telephone lines to the park office. The older underground lines were damaged by lightning.

## MAJOR CAPITAL IMPROVEMENT PROJECT PRIORITIES

The Mount Jefferson State Park Preliminary Master Plan describes the long-range vision of what the park should be. A significant portion of the master plan is devoted to identifying short- and long-term development plans for the park. The development plans are to be implemented by identifying and detailing specific capital improvement projects that can be constructed through the state construction process.

By identifying, evaluating and ranking each development project, the Division has created a priority list of capital improvement projects for each park and for the state parks system. The priorities are based on the objectives the projects address and the project's urgency. The project objectives are: protecting public health; correcting a safety or fire hazard; protecting natural resources; protecting the public's investment in park facilities; maintaining the public use of an existing facility; meeting contractual obligations; saving energy or operating costs; enhancing environmental education; increasing public accessibility; improving visitor services; improving the park's appearance; maintaining a support facility; meeting legal mandates; and controlling pollution.

The evaluation of projects for the Mount Jefferson State Park preliminary master plan ranked five projects prior to the general management plan (Table VII-1). Following the GMP evaluation, the priority list was reduced to three projects and ranked again (Table VII-2). The trail development/interpretive signs, which is a new project, is now the highest priority.

**Table VII-1. Pre-GMP Project Priority List**

| Rank | Description | Mean Score | Total Costs |
|---|---|---|---|
| 1. | Visitor center complex | 597 | $ 590,100 |
| 2. | Picnic shelter | 492 | 85,000 |
| 3. | Replace septic systems | 471 | 401,900 |
| 4. | Repave road | 364 | 97,478 |
| 5. | Ranger residence (1) | 317 | 130,700 |
| | | **TOTAL:** | $1,305,178 |

## RECOMMENDED CHANGES TO PROJECT PRIORITY LIST

### Projects with Revised Cost Estimates and Unchanged Scopes

1. The picnic shelter project ($95,800) will provide an eight-table shelter in the summit picnic area. The guard rail surrounding three sides of the picnic shelter will be renovated with big timber.

### Projects to be Deleted

1. The visitor center complex project at the summit ($590,100) was deleted. A park office at the maintenance building location will be built as a substitute.

2. The road repavement project ($97,478) was deleted because the Department of Transportation will repave the road under an annual state park road maintenance program.

3. The ranger residence project ($130,000) was deleted because a sufficient number of residences currently exist in the park.

### Projects with Changed Scopes

1. The septic system replacement project ($736,800) was expanded and renamed to reflect a larger, multi-purpose project: Expand and renovate the park office/visitor center, renovate the toilets at the summit, and add exhibits to the park office.

### Projects Proposed to be Added to List

1. The trails and interpretive signs project ($155,800) will add new trails and trail-side signs for interpretation and cultural resources.

## REVISED PROJECT LIST

**Table VII-2. Revised Project Priority List**

| Rank | Description | *Mean Score | Total Costs |
|---|---|---|---|
| 1. | Trail development/interpretive signs | 552 | $ 155,800 |
| 2. | Picnic shelter | 500 | 95,800 |
| 3. | Renovate office/summit toilets/exhibits | 484 | 736,800 |
| | | TOTAL | $ 988,400 |

* The mean score comes from the Division's Project Evaluation Program (PEP). The PEP uses an evaluation formula to rank projects that considers three factors: the objective of the project; the justification or urgency for funding; and the estimated annual number of persons (visitors and/or employees) who are affected by the project. Projects are evaluated by the park superintendent, district superintendent, and Division management.

# CHAPTER VIII

# PARK OPERATIONS

## OPERATIONS EVALUATION

The major concerns addressed in the general management plan process are identified by Division of Parks and Recreation staff as the plan is initiated. These issues are classified into three main categories: natural resources, capital improvements, and operations. This section deals with the park operations issues and recommendations. Four major management and operations issues have been identified as being of significant concern at Mount Jefferson State Park. These are:

1. Should Mount Jefferson be classified as a state park given its size, limited potential for development, and natural significance?
2. Are the current operating hours appropriate? Mount Jefferson opens one hour later and closes one hour earlier than most other state parks.
3. What visitor safety measures are appropriate at the overlooks on the road to the summit?
4. Is the trail system adequate given the park's size and natural resources?

### SHOULD MOUNT JEFFERSON BE RECLASSIFIED AS A STATE NATURAL AREA?

**Issue Statement:** Mount Jefferson's classification as a state park should be reconsidered because of its small size, limited potential for development, and natural significance.

**Background:** Mount Jefferson has limited potential developing visitor facilities because of the steep slopes that dominate the park. Current visitor facilities are limited to a park office, a picnic area, exhibits, and trails. Prior to the general management plan, only a visitor center and picnic shelter were needed to complete the planned development.

A 470-acre Registered Natural Heritage Area is contained within the boundaries of this 489-acre park. The rock outcrops at the summit and the mature forest communities on the northern-facing slopes are particularly significant.

**Recommendation:** Mount Jefferson State Park should be reclassified as a State Natural Area because of its natural significance and limited potential for development. The reclassification will occur upon approval of this general management plan. According to the Administrative Code for state natural areas, Mount

Jefferson should be classified as a conservation area, which allows the picnicking facilities and trails that currently exist.

## OPERATING HOURS

**Issue Statement**: Is it appropriate to open Mount Jefferson State Park one hour later and close one hour earlier than other state parks in the system?

**Background**: Mount Jefferson State Park is operated as a satellite of New River State Park. The operating hours at Mount Jefferson have been reduced in the past so that one staff member can open and close both parks.

**Recommendation**: Mount Jefferson State Park should continue to open one hour later and close one hour earlier than other state park units.

## SAFETY MEASURES AT OVERLOOKS

**Issue Statement**: A steep cliff is located near the parking lot at the second overlook on the park road to the summit. What are the appropriate visitor safety measures needed at this location?

**Background**: An automobile guard rail exists at the second overlook, but no pedestrian railing is there. No accidents have been reported at the site.

**Recommendation**: A warning sign is needed at this location. The warning should be consistent with the Attorney General's opinion by stating clearly the danger that exists and the injuries that could occur if the warning is not heeded.

## TRAILS SYSTEM

**Issue Statement**: The trail system, totalling about 1.2 miles, is not sufficient to provide public access to the 489-acre park.

**Background**: The trail system consists of approximately 1.2 miles of designated hiking trails. Both trails, the Luther Rock Trail and the Rhododendron Trail, originate in the summit parking lot. A trails evaluation resulted in the recommendation to build new hiking trails.

**Recommendations**: A new loop trail should be explored from the first overlook to the caves on the western side of the mountain. A second trail should extend the Luther Rock Trail to the southeast and the return by connecting into the Rhododendron Trail. These trails should be two-foot wide dirt trails. The routing and trail impact need to be determined with the assistance of the Natural Resources Section.

**Table VIII-2. Operating Budget Needs**

| Line Item | Description | | Need |
|---|---|---|---|
| 1411 | Peak load Clerk Typist ($5.02/hr x 52 wks @ 16 hrs/wk) | $ 4,176.64 | |
| | Peak load Park Attendant ($4.25/hr x 39 wks @ 16 hrs/wk) | 2,652.00 | |
| | | 6,828.64 | $ 6,829 |
| 1491 | 6 month General Utility Worker ($4.81/hr x 26 wks @ 40 hrs/wk) | 5,002.40 | |
| | 2-3 month Park Attendant ($4.25/hr x 14 wks @ 40 hrs/wk x 2) | 4,760.00 | |
| | | 9,762.00 | 9,762 |
| 2310 | Educational & scientific supplies (specimen jars, herbarium supplies, misc. small equipment) | | 600 |
| 2360 | Medical & agric. supplies (supplies for first responder & first-aid kits, herbicides for exotics, taxidermy mounts, lime, fertilizer, grass seed, landscaping plants | | 1,000 |
| 2400 | Maintenance & Construction Supplies (small tools & equip., lumber, paint, shingles) | | 4,400 |
| 2510 | Motor fuel & lubricants (2000 gals gasoline, 4 cases oil) | | 900 |
| 2520 | Tires & tubes (6 tires, tubes, stems) | | 500 |
| 2530 | Misc. parts | | 350 |
| 2590 | Other motor vehicles (misc.OP supplies) | | 400 |
| 2920 | Photographic supplies (film) | | 150 |
| 2990 | Other supplies (law enforcement supplies & boundary line signs) | | 500 |
| 3590 | Other repairs (welding services, septic tanks pumping, misc. repairs to power tools) | | 2,000 |
| 5600 | Reference books (updated law books, BLET materials, Interpretation & Education books) | | 300 |
| | **TOTAL:** | | **$ 27,691** |

# IX. LAND ACQUISITION NEEDS

## LAND ACQUISITION STATUS

Mount Jefferson State Park contains 489 acres. It was included in the 1985 appropriation for state park land acquisition, and 21 acres were acquired in this program. Two houses were included in these acquisitions.

## FUTURE LAND ACQUISITION NEEDS

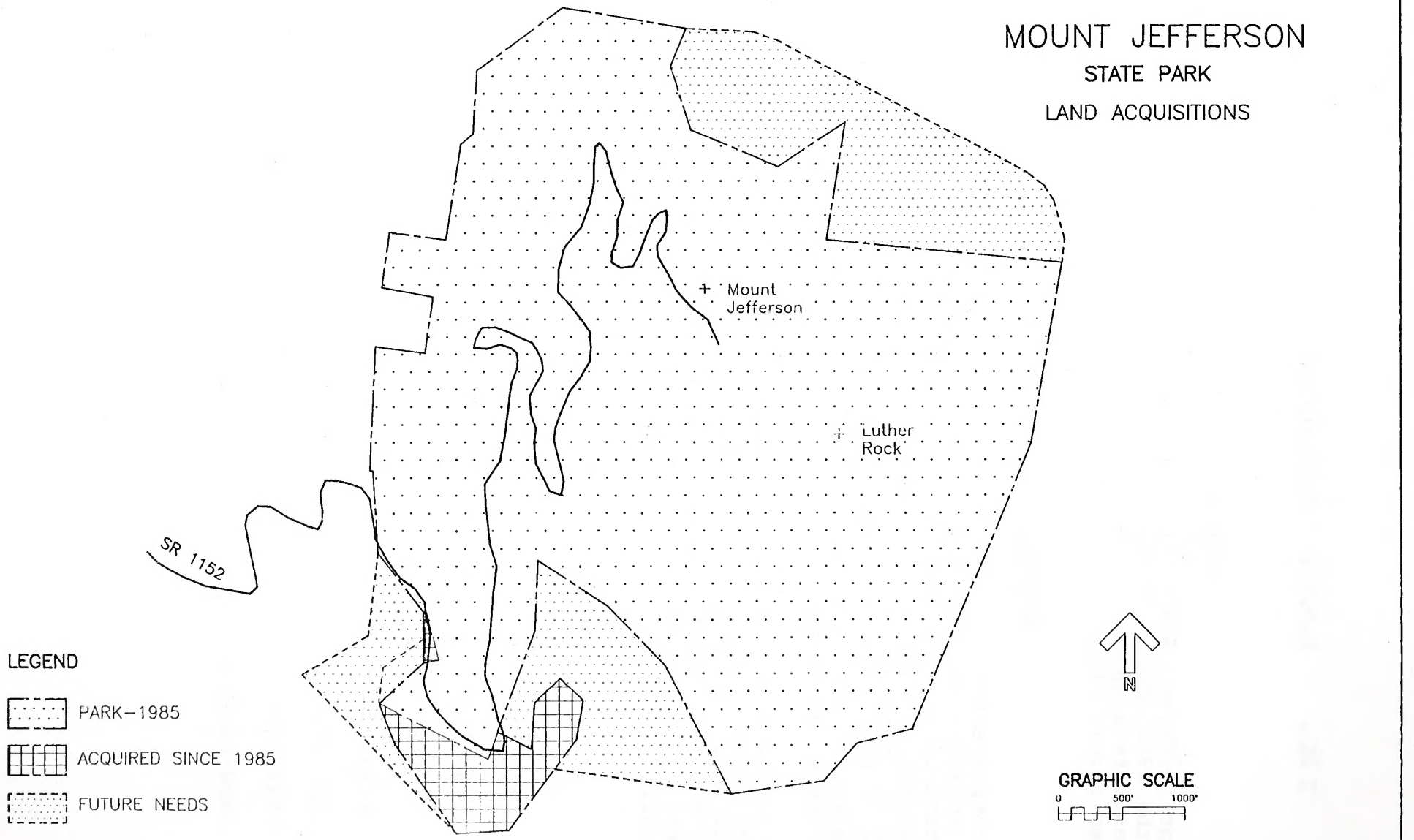
To complete the plan for Mount Jefferson State Park would require the acquisition of 58 acres. Land acquisition objectives include protection of the park entrance, elimination of access control problems, and protection of the representative natural communities on Mount Jefferson. A portion of this land is owned by the town of West Jefferson and contains a well and spring site. For this tract, protection measures other than full fee ownership by the state may be adequate.

The addition of 140 acres to the planned area would protect the total range of natural communities represented on Mount Jefferson. These additions would include high quality examples of the Northern Hardwood Forest (Typic Subtype) Montane White Oak Forest, and Montane Oak-Hickory Forest communities on the northern and southern boundaries.

## LAND ACQUISITION SUMMARY TABLE

| | |
|---|---|
| 1985 size of the park | 468 acres |
| 1985 land program additions | 21 acres |
| Current size of the park | 489 acres |
| Planned needs | 58 acres |
| Planned size of the park | 547 acres |
| Additions to master-planned needs | 140 acres |
| New total planned size of park | 687 acres |

# MOUNT JEFFERSON
## STATE PARK
### LAND ACQUISITIONS



# APPENDIX A

# PARK PROFILE

# MOUNT JEFFERSON

## PARK PROFILE

**Management Category:** Park

**Location:** Ashe County

**Size:** 489 acres

**Established:** 1956

**Facilities:**
- Park office/maintenance building
- Picnic area with 32 tables
- Trails

**Existing Staff:**
- 1 Maintenance Mechanic
- 1 Ranger II
- 1 Seasonal Assistant Ranger
- 1 Seasonal Park Attendant

**Statistics:**

| | FY 1990-91 |
|---|---|
| Visitation (Calendar 1991) | 59,702 |
| Operating Budget | $ 43,301 |
| Revenue | $ 550 |

# APPENDIX B

# CAPITAL IMPROVEMENT REQUESTS

North Carolina's Division of Parks and Recreation

MAR 19, 93 

Projects By Park In Priority Order

| | Job Description | Job Codes | Dst Cde | Locations | Mean Score | Total Costs |
|---|---|---|---|---|---|---|
| 1 | Trail development/interpretive signage | 40N13 1 | WES | Mt Jefferson | 515 | $ 155,800 |
| 2 | Picnic shelter | 180N13 4 | WES | Mt Jefferson | 501 | $ 95,800 |
| 3 | Renovate office/summit toilets/exhibits | 610R13 1 | WES | Mt Jefferson | 473 | $ 736,800 |
| | | | | | | $ 988,400 |
| | | | | | | $ 988,400 |

Total number of jobs reported = 3

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